



PATIENT

Leroy Barlow

SPECIES

Canine

BREED

Yorkshire Terrier Mix

SEX

Neutered Male

AGE

8/27/2009

WEIGHT

12 lbs

INTERPRETED BY

Andrea Nicastro,
DVM, Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Andrea Nicastro,
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(Small Animal Internal
Medicine)

HOSPITAL NAME

Flowertown AH

REFERRING VET

Dr. Kline

INVOICE

11864

DATE

10.21.22

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: vomiting and diarrhea
Current Medications: None

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The **prostate** is normal in size (1.12 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The **left kidney** is normal size (3.93 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The **right kidney** is normal size (4.42 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. A few, small cortical cysts are seen. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is mildly enlarged (1.04 cm at cranial pole) (0.79 cm at caudal pole) (2.25 cm in length); with a slightly irregular shape. A 1.23 x 0.86 cm hyperechoic nodule is observed at the cranial pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The **right adrenal gland** is mildly enlarged (0.65 cm at cranial pole) (0.77 cm at caudal pole) (1.79 cm in length); with a slightly irregular shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The **spleen** is slightly prominent in size (1.40 cm in width at the level of the hilus) with normal curvilinear peripheral contours. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The **liver** is subjectively prominent in size with relatively normal peripheral contours. The parenchyma is isoechoic relative to the spleen. A 0.73 cm irregular hyperechoic nodule is observed on the right side. The remaining parenchyma is homogenous. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The **gall bladder** is moderately distended. The wall is normal in thickness. A few, polypoid-like lesions are arising from the luminal surface. In addition, echogenic debris is adhered to the wall. A scant amount of debris is also suspended. The cystic and common bile ducts are normal/not seen.



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Gastrointestinal

The **gastric lumen** is minimally fluid-distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is borderline thickened (up to 0.26 cm) with retention of the normal layering pattern and appropriate mural detail. There is evidence of mucosal fogging in some segments. Discreet masses are not identified. The ileocecal colic junction is normal. The wall of the descending colon is mildly thickened (up to 0.43 cm) with retention of the normal layering pattern. The colonic lumen contains liquid-appearing fecal material. There is no obvious evidence of an obstructive pattern.

Pancreas

The base and right limb of the **pancreas** are visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

There is no obvious evidence of free fluid. Two prominent, rounded hypoechoic lymph nodes are observed in the left cranial abdomen, the largest measuring 1.00 cm in diameter.

Other

A brief **echocardiogram** reveals no evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Given the clinical history of chronic, intermittent GI signs, as well as the sonographic changes, a chronic enteropathy (i.e., inflammatory bowel disease, lymphangiectasia, other) is considered likely.
- The prominent cranial abdominal lymph nodes could be consistent with lymphoid hyperplasia, reactive lymphadenitis or emerging neoplasia.

Secondary Findings

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Bilateral chronic age-related renal changes with left dystrophic mineralization and trace right pyelectasia
- The mild bilateral adrenomegaly is most consistent with hyperplastic change. The left adrenal nodule trends toward the benign (i.e., benign nodular hyperplasia) with a lower possibility of an emerging tumor.
- Age-related pancreatic remodeling with fibrosis. Mild chronic pancreatitis may also be present, particularly if the patient's clinical history is supportive of this diagnosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Fecal evaluation for ova and Giardia is recommended.
- Prophylactic deworming with fenbendazole at 50 mg/kg once a day for 5 days is recommended. Repeat above protocol in 3 weeks.



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- Consider a malabsorption panel including serum cobalamin and folate, TLI and PLI (send to Texas A&M).

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- A resting cortisol level is also recommended to screen for hypoadrenocorticism. However, this condition is considered less likely given the prominent adrenal glands.

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- Consider initiation of a probiotic along with a fiber supplement (i.e., Metamucil or Konsyl).

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- Once the patient's clinical condition has stabilized, consider transitioning to a limited antigen or hydrolyzed protein diet.

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- Ultimately, GI biopsies (i.e., endoscopic, or surgical) may be necessary to get a definitive diagnosis. If biopsies are pursued, thoracic radiographs are recommended prior to anesthesia to assess cardiopulmonary status.

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- While awaiting test results, symptomatic care is recommended.

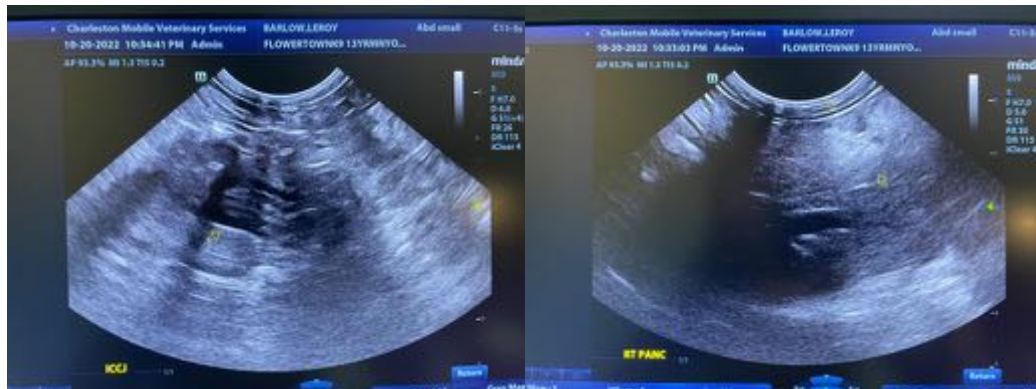
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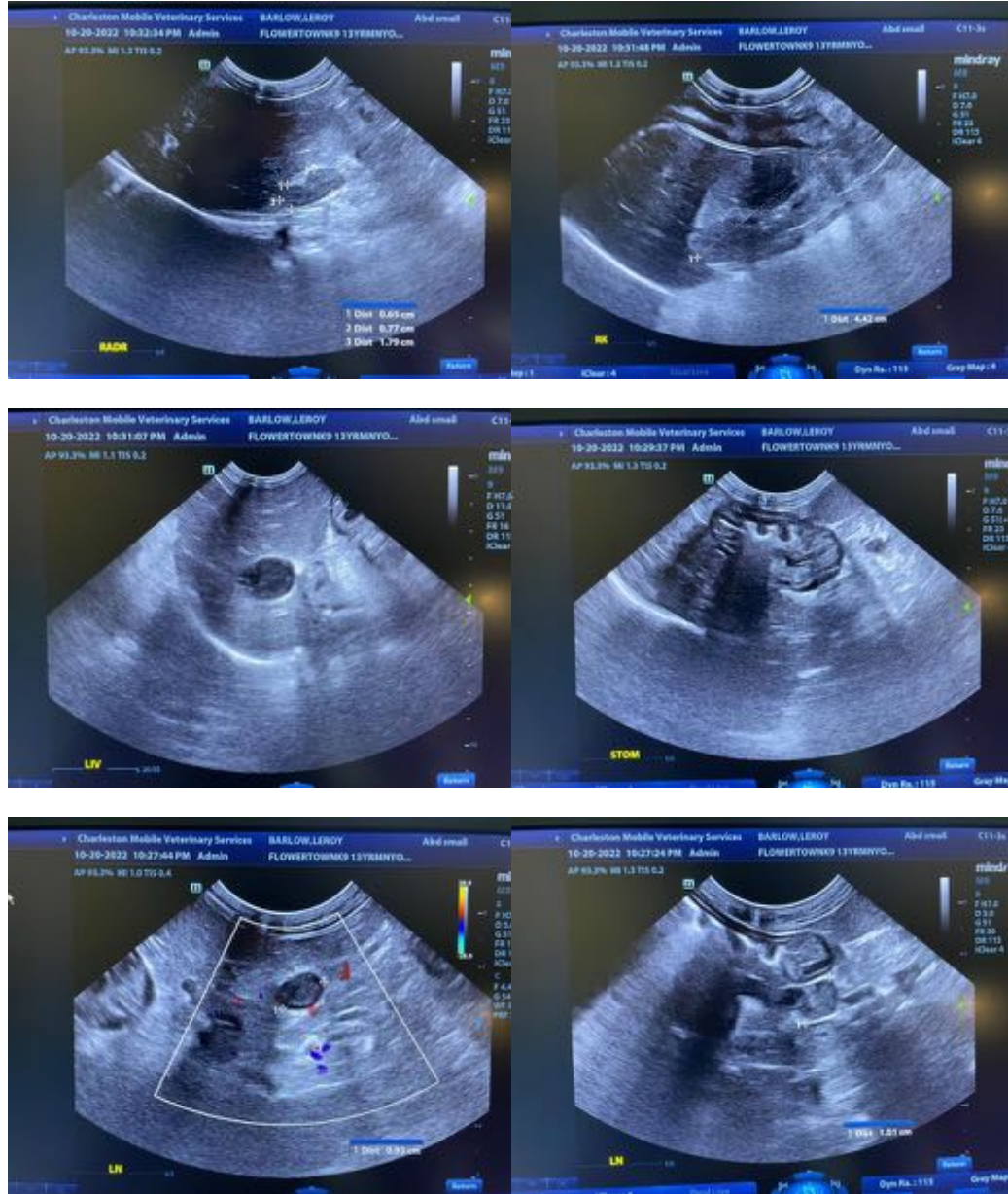
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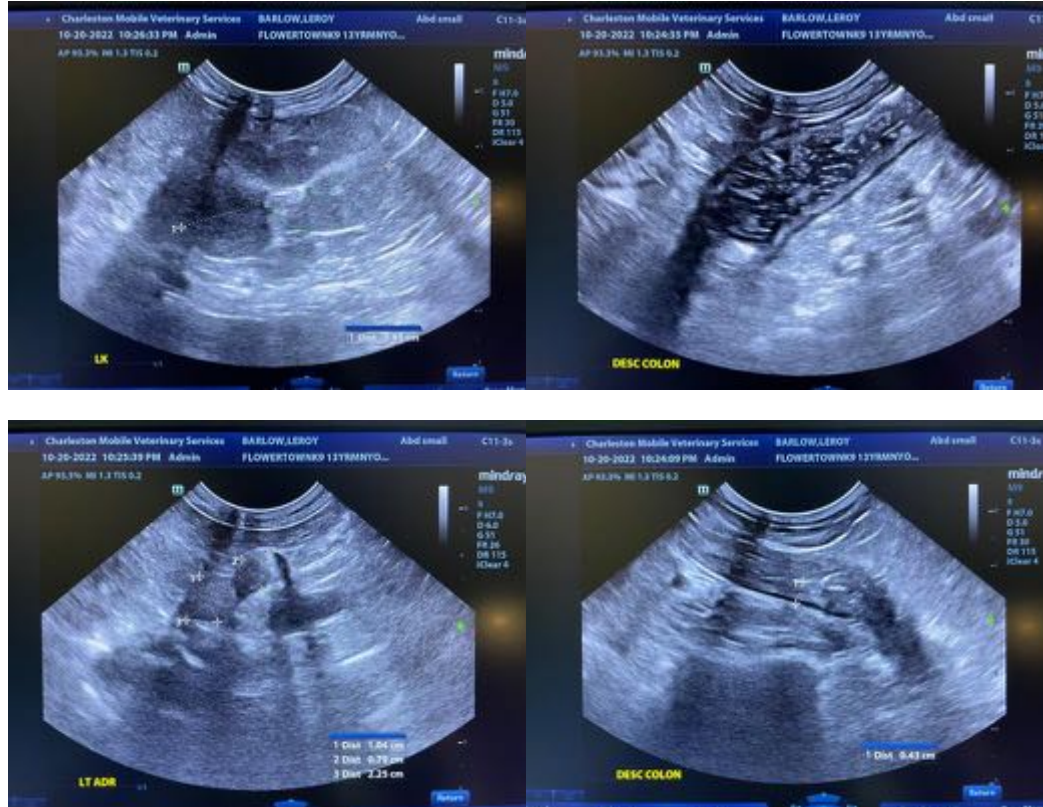
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com